

# CLMSPTO

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## WHAT IS CLAIMED IS:

1. An endoscopic imaging system, characterized in that:

a main processor unit having a signal processing means for processing a video signal of an object image projected by an imaging means is provided with an expansion slot to which an expansion unit having an external expansion facility is freely detachably connected.

2. An endoscopic imaging system according to claim 1, wherein a PC card is connected as said expansion unit to said expansion slot of said main processor unit, and digital still image data relevant to said video signal is recorded on the PC card.

3. An endoscopic imaging system according to claim 1, wherein said expansion slot portion of said main processor unit has an anti-liquid invasion structure.

4. An endoscopic imaging system according to claim 1, wherein said expansion slot portion of said main processor unit has a shielded structure to be shielded by a shield means.

5. An endoscopic imaging system according to claim 1, wherein said expansion slot portion of said main processor unit has an anti-liquid invasion structure and a

shielded structure to be shielded by a shield means.

6. An endoscopic imaging system according to claim 3 or 5, wherein a projection having a width larger than said expansion slot is formed as said anti-liquid invasion structure on the upper margin of an opening of said expansion slot.

7. An endoscopic imaging system according to claim 3 or 5, wherein a lid member is formed as said anti-liquid invasion structure over an opening of said expansion slot so that the lid member can be opened or closed freely.

8. An endoscopic imaging system according to claim 3 or 5, wherein an inner lower surface of said expansion slot near an opening thereof is shaped like a slope, which is inclined toward the opening, so that the inner lower surface can serve as said anti-liquid invasion structure.

9. An endoscopic imaging system according to claim 5, wherein a lid member made of a conducting material is formed as said anti-liquid invasion structure and shielded structure over an opening of said expansion slot so that the lid member can be opened or closed freely; a contact member that is conducting electricity to a housing shield portion of said main processor unit is formed on the perimeter of the opening of said expansion slot; and a constraining means is included for causing said lid member to close and meet said contact member when said expansion

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unit is not mounted.

10. An endoscopic imaging system according to claim 9, wherein the surfaces of a back end portion of said expansion unit, which comes back when said expansion unit is inserted, is coated with a conductive member in order to realize a conductor; and when said expansion unit is mounted, said conductor and contact member meet and the back end portion of said expansion unit blocks the opening of said expansion slot.

11. An endoscopic imaging system, comprising:

an imaging means for projecting an object image of an object in a body cavity;

a digital signal converting means for converting an image signal sent from said imaging means into a digital signal;

a signal processing means for processing said digital signal sent from said digital signal converting means;

a discrimination signal appending means for appending a given discrimination signal to said digital signal processed by said signal processing means;

a compressing means for determining a level of compressibility according to said discrimination signal appended by said discrimination signal appending means, and compressing said digital signal processed by said signal processing means; and

a recording means for recording said digital signal compressed by said compressing means on a recording medium.

12. An endoscopic imaging system according to claim 11, wherein said discrimination signal is produced according to at least any of a type of imaging means, a type of endoscope, a level of enhancement performed by said signal processing means, and given data recorded in advance on said recording medium.

13. An endoscopic imaging system according to claim 12, wherein said given data recorded in advance on said recording medium is medical-field data or patient data.

14. (Amended) An endoscopic imaging system, comprising:  
a signal processor for processing a video signal sent from an imaging device;  
a plurality of adjusting elements for adjusting various properties of a video signal sent from said signal processor;  
an external storage unit for storing adjustment values to be set by said adjusting elements;  
and  
a controller for modifying settings of said adjusting elements according to said adjustment values stored in said external storage unit.

15. (Amended) An endoscopic imaging system according to claim 14, wherein said adjusting elements include at least one of a white balance adjusting element, a light adjusting element, a tone adjusting element, and a contour enhancing element.

16. (Amended) An endoscopic imaging system according to claim 14, wherein said adjusting elements can be detachably attached to a signal processing apparatus including said signal processor and adjusting elements.

17. (Amended) An endoscopic imaging system according to claim 16, wherein said adjustment values to be set by said adjusting elements are stored as a plurality of types of adjustment values on separate external storage units.

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18. (Amended) An endoscopic imaging system according to claim 16, wherein said adjustment values to be set by said adjustment elements are specified as a set of adjustment values for each of a plurality of fields in which said endoscopic imaging system is used, and wherein each set of adjustment values are stored on separate external storage units.

19. (Amended) An endoscopic imaging system according to claim 16, wherein said adjustment values to be set by said adjusting elements are specified as a set of adjustment values for each of a plurality of operators handling said endoscopic imaging system, and wherein each set of adjustment values are stored on separate external storage units.

20. (Amended) An endoscopic imaging system according to claim 18, further comprising an alarm circuit for giving an alarm when an external storage unit other than an external storage unit, on which adjustment values associated with an intended field or operator are stored is connected to said signal processing apparatus.

21. An endoscopic imaging system, comprising:

- an imaging means for projecting an object image produced by an endoscope;
- a signal processing means for processing a video signal representing the object image projected by said imaging means;
- an image display means for displaying said video signal as an endoscopic image on a monitor;
- a PC card serving as a portable recording medium to be freely detachably attached to said signal processing means;
- an image recording means for recording digital still image data relevant to the object image projected by said imaging means on said PC card;
- a connection sensing means for sensing the connected state of said PC card;
- a remaining capacity sensing means for sensing a remaining storage capacity on said PC card;
- an arithmetic calculation means for calculating the

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number of remaining recordable images according to the remaining storage capacity sensed by said remaining capacity sensing means; and

a medium information display means for displaying medium information, which includes at least one of the connected state of said PC card and the number of remaining recordable images, on said monitor or any other display.

22. An endoscopic imaging system according to claim 21, wherein said medium information display means superimposes said medium information on said endoscopic image on said monitor.

23. An endoscopic imaging system according to claim 21, further comprising a liquid crystal monitor for displaying said medium information independently of said monitor, wherein said medium information display means displays said medium information on said liquid crystal monitor.

24. An endoscopic imaging system according to claim 23, wherein said liquid crystal monitor is located on the front panel of a camera control unit including said signal processing means.

25. An endoscopic imaging system according to claim 21, wherein every time a user records still image data on said PC card, or only when the number of images recordable

on said PC card becomes a given number of recordable images, said medium information display means displays said medium information on said monitor or any other display.

26. An endoscopic imaging system according to claim 21, wherein every time a user records still image data on said PC card, or only when the number of images recordable on said PC card becomes zero, said medium information display means displays said medium information on said monitor or any other display.

27. An endoscopic imaging system according to claim 25 or 26, further comprising a voice notification means for notifying a user of said medium information with voice while said medium information is displayed.

28. An endoscopic imaging system according to claim 21, further comprising a voice notification means for, every time a user records still image data on said PC card or only when the number of images recordable on said PC card becomes a given number of recordable images, notifying the user of said medium information.

29. An endoscopic imaging system according to claim 21, further comprising a voice notification means for, every time a user records still image data on said PC card or only when the number of images recordable on said PC card becomes zero, notifying the user of said medium

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information.

30. An endoscopic imaging system according to claim 21, further comprising an image compressing means for compressing digital still image data relevant to an object image projected by said imaging means on said PC card, and an image stretching means for stretching compressed still image data stored on and read from said PC card, wherein said image display means displays still image data, which has been stretched by said image stretching means, on said monitor.

31. (New) An endoscopic imaging system according to claim 19, further comprising an alarm circuit for giving an alarm when an external storage unit other than an external storage unit on which adjustment values associated with an intended field or operator are stored is connected to said signal processing apparatus.

32. (New) An endoscopic imaging system comprising:  
an imaging means for projecting an object image; and  
a signal processing means for processing an image signal outputted from said imaging signal means, wherein said signal processing means comprises:  
a signal processing circuit for processing said image signal outputted from said imaging means to produce a video signal;  
a plurality of adjusting circuits for adjusting the properties of the video signal sent from said signal processing circuit;

a portable recording medium slot to which a portable recording medium for storing pre-recorded adjustment values for adjustments by said adjusting circuits is detachably connectable; and

a control circuit for controlling operations of said adjusting circuits according to adjustment values stored in a portable recording medium connected to said portable recording medium slot.



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